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WATER SUPPLY OUTLOOK FOR MONTANA

Prepared by
U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE
Collaborating with
MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State, and private organizations listed on the inside back cover of this report.

AS OF
MAR. 1, 1973

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 511 N. W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR MONTANA

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

KENNETH E. GRANT

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

|||||
Released by

A. B. LINFORD

STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
Bozeman, Montana

In Cooperation with

J. A. ASLESON

DIRECTOR
Montana Agricultural Experiment Station

|||||
Report prepared by

PHILLIP E. FARNES, Snow Survey Supervisor

and

BERNARD A. SHAFER, Assistant Snow Survey Supervisor

SOIL CONSERVATION SERVICE
P.O. Box 98
Bozeman, Montana 59715

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MONTANA WATER SUPPLY OUTLOOK
March 1, 1973

* * * * *
*
* The mountain snowpack is below average over all of *
* Montana. The most deficient snowpack areas are near*
* the Kootenai-Flathead divide and in the Lower Clark *
* Fork drainage west of the divide, the Musselshell *
* and Little Big Horn headwaters east of the divide, *
* and along the Continental divide from the Canadian *
* to the Idaho border. The area near the Montana- *
* Idaho border in the Madison River headwaters and *
* the Gravelly Range have the highest snow cover with *
* water equivalents slightly below average. Many *
* areas have a snowpack comparable to the low snow- *
* pack years of 1961 and 1966. *
*
* * * * *

COLUMBIA RIVER DRAINAGE

Snow - The snowpack is one-third to one-half the amount measured at this time last year. Areas receiving the heaviest snowfall are approximately 25 percent below average, while snow water storage on some watersheds is as much as 40 to 50 percent below average.

Soils contain less moisture than average in the Kootenai, Lower Clark Fork and Bitterroot drainages. Elsewhere, soil moisture is near to slightly below average.

Streamflow - Nearly all forecasts for spring and summer runoff are 20 to 30 percent below average. Some areas are forecast to produce approximately one-half their average streamflow. Late season irrigation supplies will be much less than those during recent years of heavier snowfall. Some reservoirs are not expected to fill.

MISSOURI RIVER DRAINAGE

Snow - Water storage in the mountain snowpack varies from slightly over one-half average in the Milk, Marias, Teton, Sun and Dearborn River drainages and small tributaries on the west side of the Missouri Main Stem to a little below average on the headwaters of the Red Rock, Ruby, and Madison Rivers. Remaining areas have water equivalents 20 to 35 percent below average. Last year at this time snowpack was two to three times the amounts measured this year. In some areas the lower elevation snowpack is nearer average than at higher elevations. This is a result of the major portion of the season's snowfall occurring during lower temperature periods, when snowfall did not increase as significantly with elevation as it would have during warmer storm systems.

Mountain soils contain above average moisture in headwaters of the Beaverhead, Ruby, Madison, Gallatin, Judith and Musselshell drainages, below average in the Big Hole River, and generally near to slightly below average elsewhere.

Streamflow - Runoff in nearly all streams is forecast to be 20 to 30 percent below average, and within 10 percent of average in those areas having heavier snowfall. Runoff from the lower elevation snowpack areas is expected to be between two-thirds and one-half average. Late season irrigation supplies will be well below the recent heavy snowfall years. Nearly all reservoirs are expected to fill.

YELLOWSTONE RIVER DRAINAGE

Snow - The mountain snowpack is 20 to 25 percent below average on most tributary drainages in the upper Yellowstone and Big Horn Rivers. The northern portion of the Big Horn Mountains in Wyoming and Montana has a snow cover near two-thirds average. Some areas in the Yellowstone have a lower elevation snowpack nearer to average than at the higher elevations.

Soils in the upper Yellowstone drainage contain above average moisture which will help increase runoff from the below average snowpack.

Streamflow - Spring and summer streamflow is forecast to be below average in all drainages. The Yellowstone headwaters in Yellowstone National Park is expected to have the highest runoff percentagewise with runoff to about two-thirds average in the lower tributaries. The Tongue and Powder Rivers are expected to produce less than one-half their average runoff. Irrigation water supplies will be adequate during the main snowmelt period. Water levels will decrease earlier than usual as the low snowpack melts out. Adequate water for irrigation will be available in the Yellowstone River but some diversion structures may need to be raised and some pumps lowered to divert water from lower than average water levels.

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average
<u>COLUMBIA RIVER DRAINAGE</u>			
Kootenai	19	47	74
Flathead	29	47	73
Upper Clark Fork	26	39	65
Lower Clark Fork	11	41	64
Bitterroot	12	43	72
<u>MISSOURI RIVER DRAINAGE</u>			
Jefferson	37	47	78
Madison	20	59	81
Gallatin	13	65	75
Missouri Main Stem	11	37	64
Judith-Musselshell	8	50	72
Marias-Teton-Sun	11	31	55
Milk (Headwaters)	3	40	58
Milk (Cypress Hills)	4	21	26
<u>YELLOWSTONE RIVER DRAINAGE</u>			
Yellowstone	27	55	78
Little Big Horn	7	55	67
-3-			

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)			Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity	This Year		Last Year	Average †	
COLUMBIA RIVER BASIN								
Kootenai								
Baree Trail	3800	48	7.5	3/01	4.9	6.7	6.4	
Murphy Lake R. S.	3000	48	22.6	3/01	19.2	20.4	20.3	
Raven R. S.	3050	48	23.0	3/02	13.4	15.8	19.9	
Flathead								
Desert Mountain	5600	54	8.4	3/01	6.7	7.0	7.2	
Marias Pass	5250	54	6.5	2/25	6.0	4.8	5.3	
Clark Fork								
Black Pine	7100	48	10.0	3/01	7.2	7.4	7.4	
Lubrecht Forest	4100	48	26.8	3/01	15.0	15.7	-	
Seeley Lake R. S.	4030	48	11.9	3/01	6.6	8.2	7.9	
Skalkaho Summit	7260	48	10.8	2/28	9.7	8.9	9.6	
Bitterroot								
Gibbons Pass	7100	48	7.1	2/28	2.7	3.1	5.1	
Lolo Pass	5250	48	10.6	3/01	5.4	3.6	6.0	
MISSOURI RIVER BASIN								
Beaverhead								
Lakeview	6700	48	15.3	2/28	15.7	14.9	8.5	
Madison								
West Yellowstone	6700	48	6.5	2/28	2.5	2.7	2.5	
Gallatin								
Bridger Bowl	7250	48	17.0	2/27	16.2	16.0	16.2	
College Site No. 2	4856	54	17.7	3/02	15.7	13.9	13.6	
Lick Creek	6860	48	18.8	2/28	13.6	17.2	16.7	
Twenty-One Mile	7150	48	10.0	2/28	6.9	5.6	3.8	
Missouri Main Stem								
Kings Hill	7420	48	11.8	3/01	8.4	4.4	6.4	
Stemple Pass	6350	48	5.9	2/27	3.4	3.8	4.0	
Milk								
Beaver Creek	3950	48	20.9	2/27	7.6	13.3	-	
Rocky Boy	4700	36	10.1	2/27	5.8	6.0	-	
Yellowstone								
Battle Ridge	6020	48	17.6	2/27	11.9	13.1	13.5	
Northeast Entrance	7350	48	9.4	2/28	7.8	3.8	5.9	

RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average

<u>COLUMBIA RIVER BASIN</u>					
Kootenai	Koocanusa	4,965.0	270.3	-	-
Flathead	Hungry Horse	3,428.0	2,062.0	1,702.0	2,269.0
	Flathead Lake	1,791.0	1,010.0	911.1	963.0
	Camas (4)	45.2	31.8	28.3	28.6
	Mission Valley (8)	100.3	32.2	27.2	32.7
Clark Fork	Georgetown Lake	31.0	24.7	27.3	23.6
	Noxon Rapids	334.6	320.6	295.3	293.4
	Nevada Creek	12.6	1.7	4.1	4.9
Bitterroot	Como	34.9		8.6	11.6
	Painted Rocks	31.7	15.0	16.4	20.9

<u>MISSOURI RIVER BASIN</u>					
Beaverhead	Clark Canyon	328.9	154.4	141.7	129.5
	Lima	84.0	45.7	49.9	22.9
Ruby	Ruby	38.8	26.5	28.7	26.5
Madison	Hebgen Lake	377.5	253.8	250.3	170.7
	Ennis Lake	41.0	24.0	39.1	37.7
Gallatin	Middle Creek	8.0	3.0	3.7	3.6
Missouri	Canyon Ferry	2,043.0	1,419.0	1,594.0	1,562.0
	Hauser & Helena	61.9	61.3	62.5	57.1
	Lake Helena	10.4	10.2	10.7	8.8
	Holter Lake	81.9	80.8	29.9	54.3
	Smith River	10.7	4.7	4.0	6.3
	Bair	7.0	4.2	3.0	4.4
	Martinsdale	23.1	9.7	7.8	6.4
	Deadman's Basin	72.2	55.4	46.4	46.1
	Fort Peck	19,410.0	16,550.0	16,180.0	10,900.0
Sun	Gibson	105.0	51.9	42.4	49.4
	Willow Creek	32.3	22.3	21.0	20.8
	Pishkun	32.0	17.1	17.4	17.7
Marias	Lower Two Medicine	16.6		-	0.0
	Four Horns	19.2		-	12.1
	Swift	30.0	16.3	15.3	19.7
	Lake Frances	112.0	93.8	67.9	83.5
	Tiber	1,347.0	419.3	487.0	628.0
Milk	Fresno	127.2	77.2	37.4	59.4
	Nelson	66.8	45.2	34.9	41.0
	Lake Sherburne	66.1	13.7	19.0	20.6
Yellowstone	Mystic Lake	20.8	5.3	7.0	7.7
	Tongue River	68.0	27.9	-	22.8
	Cooney	27.5	16.0	12.8	14.3
Bighorn	Bighorn Lake	1,356.0	886.0	921.5	586.8

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average

COLUMBIA RIVER BASIN

FISHER RIVER					
Libby (near)	165	55	Apr-Sept		298
	155	55	Apr-July		281
KOOTENAI RIVER					
Libby (at)	6900	86	Apr-Sept	9929	8025
	6000	86	Apr-July	8546	6956
YAAK RIVER					
Troy (near)	440	77	Apr-Sept		573
	420	76	Apr-July		549
KOOTENAI RIVER					
Leonia (at)	7750	84	Apr-Sept	11041	9198
	6800	84	Apr-July	9703	8072
	5500	85	Apr-June	7798	6463
RACETRACK CREEK					
Anaconda (near)	26.5	78	Apr-Sept		34.1
	21.5	78	Apr-July		27.6
FLINT CREEK					
Boulder Creek (below)(3)	52.5	75	Apr-Sept		69.6
	41.0	74	Apr-July		55.1
MIDDLE FORK ROCK CREEK					
Philipsburg (near)	55.5	76	Apr-Sept		73.4
	50.0	76	Apr-July		66.2
NEVADA CREEK					
Finn (near)	8.4	41	Apr-Sept		20.7
	8.0	41	Apr-July		19.3
BLACKFOOT RIVER					
Bonner (near)	690	68	Apr-Sept	1429	1008
	600	66	Apr-July	1310	912
	520	66	Apr-June	1156	788
CLARK FORK RIVER					
Milltown (above)(4)	590	78	Apr-Sept	1000	755
	510	78	Apr-July	890	659
	430	77	Apr-June	782	562
CLARK FORK RIVER					
Missoula (above)	1280	73	Apr-Sept	2430	1763
	1110	71	Apr-July	2201	1572
	950	70	Apr-June	1937	1350

(3) Sum Flint Creek at Maxville and Boulder Creek at Maxville.

(4) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
WEST FORK BITTERROOT RIVER					
Conner (near)(5)	115	68	Apr-Sept		170
	105	66	Apr-July		158
BITTERROOT RIVER					
Darby (near)	370	66	Apr-Sept	726	558
	340	66	Apr-July	683	517
	300	66	Apr-June	606	453
SKALKAHO CREEK					
Hamilton (near)	40.5	73	Apr-Sept		55.8
	35.0	72	Apr-July		48.9
BURNT FORK CREEK					
Stevensville (near)(10)	26.0	76	Apr-Sept		34.2
	22.5	76	Apr-July		29.6
BITTERROOT RIVER					
Missoula (at)(6)	980	67	Apr-Sept		1466
	900	66	Apr-July		1360
	790	67	Apr-June		1175
CLARK FORK RIVER					
Missoula (below)	2270	70	Apr-Sept		3229
	2010	69	Apr-July		2932
	1750	69	Apr-June		2525
ST. REGIS RIVER					
St. Regis (near)	215	65	Apr-Sept		332
	200	63	Apr-July		316
CLARK FORK RIVER					
St. Regis (at)	3000	68	Apr-Sept	6399	4398
	2700	68	Apr-July	5908	3993
	2350	68	Apr-June	5170	3451
NORTH FORK FLATHEAD RIVER					
Columbia Falls (near)	1650	82	Apr-Sept		2023
	1480	80	Apr-July		1846
	1270	81	Apr-June		1562
MIDDLE FORK FLATHEAD RIVER					
West Glacier (near)	1400	72	Apr-Sept	2354	1931
	1300	72	Apr-July	2165	1791
	1100	72	Apr-June	1832	1521
SOUTH FORK FLATHEAD RIVER					
Columbia Falls (near)(7)	1880	80	Apr-Sept	2850	2358
	1750	78	Apr-July	2688	2235
	1550	79	Apr-June	2338	1967

(5) Adjusted for storage in Painted Rocks Reservoir.

(6) Difference in observed flow Clark Fork above and below Missoula.

(7) Adjusted for storage in Hungry Horse Reservoir.

(10) Adjusted for diversion into Sunset Highline Canal.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
FLATHEAD RIVER					
Columbia Falls (at)(7)	5000	77	Apr-Sept	7821	6467
	4700	78	Apr-July	7226	6003
	4100	79	Apr-June	6164	5155
SWAN RIVER					
Big Fork (near)	450	66	Apr-Sept		688
	400	66	Apr-July		607
	330	67	Apr-June		496
FLATHEAD RIVER					
Polson (near)(8)	5800	75	Apr-Sept	9182	7701
	5400	75	Apr-July	8495	7157
	4650	76	Apr-June	7175	6122
CLARK FORK RIVER					
Plains (near)(8)	9100	73	Apr-Sept	16073	12482
	8250	72	Apr-July	14739	11448
	7100	72	Apr-June	12597	9802
THOMPSON RIVER					
Thompson Falls (near)	185	65	Apr-Sept		283
	160	63	Apr-July		253
PROSPECT CREEK					
Thompson Falls (at)	110	72	Apr-Sept		152
	100	70	Apr-July		143
CLARK FORK RIVER					
Whitehorse Rapids (at)(9)	10100	72	Apr-Sept		13987
	9200	72	Apr-July		12787
	7800	71	Apr-June		10953

(7) Adjusted for storage in Hungry Horse Reservoir.

(8) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

(9) Adjusted for storage in Hungry Horse, Flathead Lake and Noxon Rapids Reservoirs.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average

MISSOURI RIVER BASIN

BEAVERHEAD RIVER					
Grant (near) (11) (12)	72.0	68	Apr-Sept	207	106
	62.0	69	Apr-July	148	90
RUBY RIVER					
Alder (near)	76.0	95	Apr-Sept		80.0
	62.0	93	Apr-July		67.0
BIG HOLE RIVER					
Melrose (near)	430	62	Apr-Sept		690
	400	62	Apr-July		642
BIRCH CREEK					
Glen (near)	7.7	59	Apr-Sept		13.1
	6.5	59	Apr-July		11.0
JEFFERSON RIVER					
Silver Star (at)	520	60	Apr-Sept		863
	460	60	Apr-July		770
BOULDER RIVER					
Boulder (near)	62.0	79	Apr-Sept		78.9
	60.0	80	Apr-July		75.5
WILLOW CREEK					
Harrison (near)	9.5	61	Apr-Sept		15.5
	8.5	60	Apr-July		14.2
MADISON RIVER					
West Yellowstone (near)	197	93	Apr-Sept		212
	150	94	Apr-July		160
MADISON RIVER					
Grayling (near) (13)	415	97	Apr-Sept	626	430
	320	95	Apr-July	487	337
MADISON RIVER					
McAllister (near) (14)	660	90	Apr-Sept	1110	734
	530	90	Apr-July	872	587
GALLATIN RIVER					
Gateway (near)	395	86	Apr-Sept		461
	340	87	Apr-July		393
BRIDGER CREEK					
Bozeman (near)	15.0	73	Apr-Sept		20.5
	14.0	73	Apr-July		19.3

(11) Adjusted for storage in Lima Reservoir.

(12) Adjusted for storage in Clark Canyon Reservoir.

(13) Adjusted for storage in Hebgen Lake.

(14) Adjusted for storage in Hebgen and Ennis Lakes.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
HYALITE CREEK					
Bozeman (near)(15)	32.5	87	Apr-Sept		37.4
	28.0	86	Apr-July		32.5
GALLATIN RIVER					
Logan (at)	340	72	Apr-Sept		473
	280	70	Apr-July		401
MISSOURI RIVER					
Toston (at)(16)	1450	69	Apr-Sept	2784	2105
	1250	68	Apr-July	2404	1836
SHEEP CREEK					
White Sulphur Springs (near)	9.5	52	Apr-Sept		18.4
	8.0	50	Apr-July		16.0
SUN RIVER					
Gibson Dam (at)(17)	385	64	Apr-Sept	749	604
	350	63	Apr-July	685	555
BELT CREEK					
Monarch (near)	72.0	66	Apr-Sept		109
	65.0	65	Apr-July		100
MISSOURI RIVER					
Fort Benton (at)(18)	2000	60	Apr-Sept		3321
	1650	58	Apr-July		2834
TWO MEDICINE CREEK					
Browning (near)(19)	170	66	Apr-Sept		256
	160	65	Apr-July		245
BADGER CREEK					
Browning (near)	88.0	66	Apr-Sept		133
	75.0	65	Apr-July		116
CUT BANK CREEK					
Cut Bank (at)	71.0	59	Apr-Sept		120
	65.0	59	Apr-July		111
MARIAS RIVER					
Shelby (near)(20)	300	50	Apr-Sept		604
	280	48	Apr-July		581

(15) Adjusted for storage in Middle Creek Reservoir.

(16) Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.

(17) Adjusted for storage in Gibson Reservoir and diversions.

(18) Adjusted for storage in Canyon Ferry Reservoir.

(19) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.

(20) Adjusted for storage in Two Medicine, Four Horns, Lake Frances and Swift Reservoirs.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
MISSOURI RIVER					
Virgelle (at) (21)	2350	58	Apr-Sept	4036	
	1930	55	Apr-July	3511	
SOUTH FORK JUDITH RIVER					
Utica (near)	5.7	46	Apr-Sept	12.5	
	5.3	45	Apr-July	11.7	
MISSOURI RIVER					
Landusky (near) (21)	2600	58	Apr-Sept	4484	
	2100	54	Apr-July	3889	
NORTH FORK MUSSELSHELL RIVER					
Delpine (near)	2.6	47	Apr-Sept	5.5	
	2.1	45	Apr-July	4.7	
SOUTH FORK MUSSELSHELL RIVER					
Martinsdale (above)	21.0	46	Apr-Sept	46.2	
	20.0	45	Apr-July	44.0	
MISSOURI RIVER					
Fort Peck Dam (below) (22)	2250	52	Apr-Sept	4312	
	1950	52	Apr-July	3824	
MILK RIVER					
Eastern Crossing (at)	200	71	Mar-Sept	281	
MISSOURI RIVER					
Wolf Point (near) (22)	2400	51	Apr-Sept	4683	
	2000	48	Apr-July	4168	
MISSOURI RIVER					
Williston, N.D. (near) (29)	6300	57	Apr-Sept	10998	
	5600	57	Apr-July	9823	

SASKATCHEWAN RIVER BASIN

ST. MARY RIVER					
Babb (near) (30)	420	85	Apr-Sept	492	
	360	84	Apr-July	427	

- (21) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.
 (22) Adjusted for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs.
 (29) Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill, Boysen and Yellowtail Reservoirs. Sum Yellowstone River near Sidney and Missouri River near Culbertson.
 (30) Adjusted for storage in Lake Sherburne.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average

YELLOWSTONE RIVER BASIN

YELLOWSTONE RIVER					
Corwin Springs (at)	1750	93	Apr-Sept	2349	1880
	1460	93	Apr-July	1952	1575
YELLOWSTONE RIVER					
Livingston (near)	1900	90	Apr-Sept		2122
	1575	89	Apr-July		1769
BOULDER RIVER					
Big Timber (at)	258	74	Apr-Sept		347
	244	75	Apr-July		327
STILLWATER RIVER					
Absarokee (near)(25)	405	73	Apr-Sept		558
	345	73	Apr-July		474
CLARKS FORK RIVER					
Belfry (near)	445	76	Apr-Sept		582
	410	77	Apr-July		530
ROCK CREEK					
Red Lodge (near)	79.0	74	Apr-Sept	129	106
	58.0	71	Apr-July	92.8	82.1
YELLOWSTONE RIVER					
Billings (at)	3020	76	Apr-Sept	4532	3944
	2632	77	Apr-July	3650	3400
BIG HORN RIVER					
St. Xavier (near)(26)	1050	61	Apr-Sept	2153	1719
	1000	62	Apr-July	1861	1625
LITTLE BIG HORN RIVER					
Lodgegrass (near)(28)	70.0	57	Apr-Sept		123
	60.0	55	Apr-July		109
YELLOWSTONE RIVER					
Miles City (at)(27)	4100	70	Apr-Sept		5850
	3600	69	Apr-July		5177
YELLOWSTONE RIVER					
Sidney (near)(27)	3800	63	Apr-Sept		6069
	3500	64	Apr-July		5454

(25) Adjusted for storage in Mystic Lake.

(26) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake and Yellowtail Reservoirs.

(27) Adjusted for storage in Buffalo Bill, Boysen and Yellowtail Reservoirs.

(28) Sum Little Big Horn below Pass Creek and Lodgegrass Creek near Wyola.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

COLUMBIA RIVER BASINKOOTENAI RIVER

Bald Eagle Peak	5700	3/02	117	42.2	81.6	-
Banfield Mountain	5600	3/01	49	16.7	34.0	-
Banfield Mountain Pillow	5600	3/01	SP	14.4	21.2	-
Baree Creek	5500	3/02	84	29.7	64.5	43.5
Baree Midway	4600	3/01	59	19.9	53.9	33.8
Baree Trail	3800	3/01	4	1.6	17.4	8.2
Bear Mountain	5400	2/28	102	43.7	80.3	-
Bristow Creek	3900	3/01	22	8.3	17.6	-
Brush Creek	5000	2/27	26	6.6	16.8	11.7
Brush Creek Timber	5000	2/27	23	5.8	15.0	10.4
Cedar Grove	4100	3/02	17	5.0	18.7	-
Davis Creek	5400	2/27	56	19.6	32.1	-
Fernie	3500	3/01	13	3.8	14.4	8.6
Field	4200	2/27	22	4.9	9.6	5.9
Garver Creek	4250	2/27	30	9.4	14.2	-
Garver Creek Pillow	4250				11.1	-
Glacier	4100	2/27	65	23.2	36.6	25.2
Graves Creek	4300	2/26	38	12.5	26.8	17.0
Gray Creek	5100	2/27	47	15.3	25.5	16.0
Halverson Creek	4850	2/28	80	32.4	57.2	-
Hawkins Lake	6450	2/27	66	24.4	40.3	-
Hawkins Lake Pillow	6450	2/27	SP	20.6	28.0	-
Keeler Creek	3300	2/28	9	4.0	20.6	-
Kicking Horse	5400	2/27	44	10.2	18.6	13.4
Kimberley	3800	2/25	22	5.0	11.8	8.0
Lost Soul	4800	3/01	36	11.5	22.8	-
Marble Canyon	5000	2/27	39	10.0	22.8	12.7
Morrissey Ridge	6100	3/05	69	22.4	39.6	25.6
New Fernie	4100	3/01	35	10.1	23.0	13.6
Poorman Creek	5100	3/02	65	21.8	52.4	-
Poorman Creek Pillow	5100	3/02	SP	17.6	33.9	-
Red Mountain	6000	2/27	43	13.2	27.1	17.4
Sinclair Pass	4500	2/28	21	4.8	10.3	5.6
Stahl Peak	6050	2/26	89	33.5	49.9	-
Sullivan Mine	5100	2/28	37	11.0	18.3	12.4
Upper Elk River	4400	2/25	19	5.4	13.0	7.4
Weasel Divide	5450	2/26	76	26.4	49.5	31.2

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

FLATHEAD RIVER

Bassoo Peak	5150	3/01	14	5.2	16.2	10.2
Beaver Lake	5900	3/03	46	11.8	39.2	20.0
Big Creek	6750	2/28	80	31.4	51.8	39.2
Camp Misery	6400	2/28	99	35.4	57.0	41.0
Desert Mountain	5600	3/01	34	10.7	21.7	14.0
Fatty Creek	5500	2/28	52	15.4	31.1	19.6
Griffin Creek Divide	5150	2/28	29	8.6	17.4	11.3
Gunsight Lake	6300	3/03	75	26.2	55.0	36.0
Hell Roaring Divide	5770	3/02	71	24.8	43.3	27.5
Holbrook	4530	3/01	13	3.9	17.7	9.9
Kishenehn	3890	2/26	20	5.3	14.5	9.3
Logan Creek	4300	2/27	17	4.0	10.6	8.2
Marias Pass	5250	2/28	30	7.9	25.2	16.1
Mineral Creek	4000	3/01	35	11.8	22.3	19.1
Noisy Creek	3600	2/28	4	0.9	7.2	-
North Fork Jocko	6330	3/01	80	28.6	57.3	40.4
Spotted Bear Mountain	7000	3/03	30	8.8	23.9	13.6
Trinkus Lake	6100	3/03	93	32.0	53.6	37.0
Twin Creeks	3580	3/03	12	3.4	22.9	11.3
Upper Holland Lake	6200	3/03	69	21.7	49.9	30.4

CLARK FORK RIVER

Black Pine	7100	3/01	28	8.6	23.8	11.6
Black Pine Pillow	7100	3/01	SP	8.1	15.7	11.6
Combination	5600	3/01	13	3.0	10.5	-
Combination Pillow	5600	3/01	SP	6.8	-	-
Copper Bottom	5200	3/02	17	5.8	21.0	-
Copper Camp	6950	3/02	56	17.9	50.0	-
Copper Creek	5700	3/02	29	7.4	29.7	13.9
Copper Lake Creek	6100	3/02	46	14.5	41.1	-
Cotter Mine	6250	Course Destroyed			31.3	15.1
Coyote Hill	4200	3/01	14	3.8	15.4	10.2
El Dorado Mine	7800	2/27	41	12.3	27.2	16.8
Fred Burr Pass	8000	2/26	45	14.1	30.0	22.0
Gold Creek Lake	7200	2/27	34	10.6	22.0	12.6
Heart Lake Trail	4800	2/27	27	8.2	39.2	20.2
Hoodoo Basin	6000	2/27	86	31.5	68.6	45.6
Hoodoo Basin Pillow	6000	3/01	SP	30.1	50.8	44.6
Hoodoo Creek	5900	2/27	80	29.4	68.8	42.5
Intergaard	6450	2/28	19	4.8	12.6	7.0
Lookout	5250	3/01	55	17.9	49.3	32.3
Lubrecht Flume	4680	3/01	10	3.0	12.6	-
Lubrecht Flume Pillow	4680	3/01	SP	3.3	8.2	-

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

CLARK FORK RIVER (Continued)

Lubrecht Forest No. 3	5450	2/27	16	3.7	12.4	6.6
Lubrecht Forest No. 4	4650	2/27	5	1.6	7.0	3.5
Lubrecht Forest No. 6	4040	2/27	4	1.4	7.8	4.2
Lubrecht Hydroplot	4200	3/01	8	2.6	9.7	-
North Fork Elk Creek	6250	3/01	26	6.7	19.9	-
Peterson Meadows	7200	2/27	24	6.3	13.5	-
Red Lion	7100	2/26	32	8.8	20.2	13.7
Skalkaho Summit	7260	2/28	48	15.8	40.7	22.8
Slide Rock Mountain	7100	2/28	30	8.4	24.2	12.2
Southern Cross	6500	2/28	12	3.2	9.4	6.0
Storm Lake	7780	2/27	31	6.8	14.8	11.2
Stuart Mill	6500	2/28	16	3.8	10.1	5.8
Stuart Mountain	7400	3/02	66	22.6	39.8	26.6
TV Mountain	6800	2/28	39	11.7	28.7	15.0

BITTERROOT RIVER

Ambrose	6480	3/02	41	9.6	18.4	11.5
East Fork Ranger Station	5400	2/28	15	5.0	10.8	6.3
Gibbons Pass	7100	2/27	49	15.8	29.2	19.5
Lolo Pass	5230	2/26	52	17.3	46.7	29.0
Lost Horse	5940	3/01	63	19.9	50.2	28.0
Moose Creek	6200	2/28	36	10.3	25.6	14.2
Nez Perce Camp	5580	2/26	31	8.2	21.6	12.7
Nez Perce Pass	6570	2/26	37	10.8	22.7	13.8
Saddle Mountain	7940	2/28	49	15.3	31.7	21.7
Saddle Mountain Pillow	7940	2/28	SP	15.5	23.6	-
Savage Pass	6600	2/26	50	16.6	36.4	24.9
Twelvemile Creek	5600	3/01	39	13.2	37.4	-
Twelvemile Creek Pillow	5600	3/01	SP	12.0	24.1	-
Twin Lakes	6510	3/01	78	26.2	60.7	37.2
Twin Lakes Pillow	6400	3/01	SP	24.2	43.7	-

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

MISSOURI RIVER BASIN

BEAVERHEAD RIVER

Bloody Dick	7600	3/01	24	6.1	18.1	9.2
Camp Creek	6800	2/27	30	7.7	9.9	7.8
Carter Creek	7400				6.1	3.8
Dad Creek Lake	8400	3/03	33	8.1	15.5	9.7
Elk Horn Springs	7800	3/01	21	4.1	12.9	8.4
Gold Stone	8100	3/01	29	8.0	22.7	12.2
Kilgore	6200	2/27	36	9.5	11.2	8.3
Lakeview Canyon	6930	2/27	26	6.6	13.3	9.7
Lakeview Ridge	7400	2/27	24	6.0	11.1	8.5
Lemhi Pass	7480	2/28	21	4.9	10.3	6.9
Lemhi Ridge	8100	2/28	25	5.8	14.3	-
Sawtelle Mountain	8715	2/28	69	22.9	35.8	-
Trail Creek	7090	2/28	20	4.4	11.2	6.3
White Elephant	7700	2/28	54	17.2	-	-
White Pine Ridge	8850	3/03	19	4.1	7.7	4.0

RUBY RIVER

Branham Lakes	8850	3/02	53	16.2	29.2	-
Clover Meadow	8600	3/03	40	10.4	17.8	12.5
Divide	7800	3/03	32	8.1	13.1	8.2
Middle Mill Creek	7850	3/02	36	9.2	17.4	-
Notch	8500	3/03	37	10.3	17.3	10.8
Smuggler Mine	6960	3/02	27	5.8	8.8	-

BIG HOLE RIVER

Abundance Lake	8800	3/03	37	10.9	28.2	15.9
Calvert Creek	6450	3/02	29	7.0	19.2	-
Darkhorse Lake	8600	3/03	47	16.4	35.6	22.5
Foolhen	8280	3/03	32	9.5	22.2	14.5
Jahnke Creek	7340	3/01	24	6.2	18.4	8.2
Jahnke Lake Trail	7200	3/01	24	5.8	18.6	-
Mudd Lake	7650	3/02	42	11.9	29.2	-
Palisade Creek	8250	3/02	58	19.2	-	-
Slag-A-Melt Lake	8750	3/03	57	20.6	31.0	-

JEFFERSON RIVER

Berry Meadow	7300	2/27	17	3.7	12.1	6.7
Copper Mountain	7700	3/01	29	7.1	12.1	8.4
Nez Perce Creek	6500	3/01	18	4.6	8.4	-
Picnic Grounds	6500	2/28	12	2.0	6.4	4.0
Pipestone Pass	7200	2/26	13	2.6	6.7	4.3
Rocker Peak	8000	2/27	30	7.8	19.6	-
Rocker Peak Pillow	8000	2/27	SP	7.6	13.0	-
Uncle Sam Gulch	6500	2/27	17	3.8	12.5	-

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

MADISON RIVER

Big Springs	6500	2/28	49	14.7	25.6	17.9
Black Bear	7950	2/26	85	28.4	46.8	-
Black Bear Pillow	7950	2/26	SP	25.1	44.6	-
Black Canyon	7850	2/26	76	26.0	38.4	28.5
Black Moose	8125	2/26	80	30.4	53.2	34.0
Call Road	8050	3/03	32	8.5	12.1	8.4
Four Mile	6900	2/26	22	5.4	10.9	6.6
Hebgen Dam	6550	2/27	32	8.2	12.6	10.0
Island Park	6315	2/28	44	12.0	17.6	13.9
Jack Creek	7500	2/27	16	3.6	4.2	4.8
Lake Creek	6100	2/27	24	5.6	10.2	-
Latham Springs	7650	2/26	75	26.8	34.8	27.8
Lower Twin	7900	2/26	42	12.5	25.0	15.6
Lucky Dog	6900	2/26	58	19.6	27.8	21.1
Madison Plateau	7750	2/26	51	15.6	27.0	-
Madison Plateau Pillow	7750	2/26	SP	15.1	29.6	-
Norris Basin	7500	2/25	31	7.6	14.5	9.2
North Meadow	7500	2/26	20	4.6	10.9	6.2
Potomageton Park	7150	2/27	36	10.3	16.0	12.8
Sentinel Creek	8300	2/27	54	16.1	24.4	20.3
Targhee Pass	7000	2/28	33	8.0	16.5	12.0
Tepee Creek	8000	2/27	37	9.2	17.3	-
Tepee Creek Pillow	8000	2/27	SP	8.0	13.8	-
Valley View	6500	2/28	32	8.0	19.1	13.3
West Yellowstone	6700	2/27	32	8.1	14.7	9.8
West Yellowstone Pillow	6700	2/28	SP	5.8	10.7	7.4
Whiskey Creek	6800	2/26	48	14.3	23.1	-
Whiskey Creek Pillow	6800	2/26	SP	11.7	20.9	-

GALLATIN RIVER

Arch Falls	7350	2/28	28	7.0	10.4	10.0
Bear Basin	8150	2/26	42	12.5	18.2	16.8
Bridger Bowl	7250	2/27	44	14.8	26.4	22.5
Bridger Bowl Pillow	7250	2/27	SP	13.7	23.6	21.8
Carrot Basin	9000	2/27	76	26.6	39.8	-
Devils Slide	8100	2/28	42	12.6	18.4	17.9
Hood Meadow	6600	2/28	28	7.2	9.2	8.5
Lick Creek	6860	2/28	27	6.9	8.6	8.7
Lick Creek Pillow	6860	2/28	SP	5.0	6.6	7.1
Little Park	7400	2/26	34	8.8	15.4	12.6
Maynard Creek	6210	2/27	40	11.5	20.2	14.2
Maynard Creek Pillow	6210	2/27	SP	4.5	11.4	9.0
New World	6700	2/28	27	7.6	9.0	8.6
Shower Falls	8100	2/28	51	15.8	22.5	20.8
Shower Falls Pillow	8100	2/28	SP	13.9	20.2	18.8
Twenty-One Mile	7150	2/28	37	10.0	20.1	15.4

SNOW

SNOW		THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
MISSOURI RIVER (Main Stem)						
Boulder Mountain	7950	3/01	37	10.4	25.9	13.4
Chessman Reservoir	6200	3/02	6	1.1	6.5	3.4
Deadman Creek	6450	3/01	24	6.2	16.5	9.7
Deadman Creek Pillow	6450	3/01	SP	4.7	14.1	-
Elk Peak	8000	3/02	34	8.7	19.2	13.4
Frohner Meadows	6480	2/26	19	4.4	11.7	-
Frohner Meadows Pillow	6480	2/26	SP	5.1	-	-
Grasshopper	7000	3/02	18	4.4	6.6	4.3
Kings Hill	7500	2/28	28	6.4	19.1	10.7
Stemple Pass	6600	2/27	23	4.4	15.8	9.2
Ten Mile Lower	6600	3/01	18	4.0	10.5	6.0
Ten Mile Middle	6800	3/01	24	5.3	14.7	8.8
Ten Mile Upper	8000	3/01	26	7.4	17.9	11.5
SUN-TETON-MARIAS RIVERS						
Badger Pass	6900	3/03	70	24.2	56.8	31.8
Blue Lake	5900	3/03	55	14.8	43.0	24.0
Cabin Creek	5200	2/27	14	4.6	9.0	7.0
Five Bull	5700	3/03	9	2.5	13.3	5.7
Freight Creek	6000	3/03	23	6.0	29.1	14.1
Goat Mountain	7000	3/03	22	5.1	-	10.2
Mount Lockhart	6400	2/23	38	10.2	33.8	-
Mount Lockhart Pillow	6400	2/23	SP	9.2	30.6	-
Waldron	5600	2/23	15	3.6	17.8	-
Waldron Pillow	5600	2/23	SP	5.9	17.8	-
Wrong Creek	5700	3/01	23	5.4	24.4	14.3
Wrong Ridge	6800	3/01	34	9.5	29.0	19.4
JUDITH RIVER						
Avalanche	7100	3/01	42	11.2	17.6	-
Big Snowy	7150	3/01	44	10.8	15.9	-
Crystal Lake	6100	3/01	36	8.8	10.1	11.1
Rock Creek	5600	3/01	24	6.1	7.8	7.5
Spur Park	8100	3/01	36	10.6	30.7	16.5
Spur Park Pillow	8100	3/01	SP	11.0	31.4	-
MUSSELSHELL RIVER						
Daisy Peak	7600	3/01	27	6.9	16.9	-
Eagle Creek	7000	Not Measured			15.4	-
Forest Lake	6400	Not Measured			14.7	-
Haymaker	8050	Not Measured			17.6	-
Johnson Park	6450	3/01	16	3.8	10.1	-

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

MILK RIVER

Bear Paw Ski Area	5200	2/27	11	2.0	6.2	-
Boxelder Creek	5100	2/27	15	2.8	-	-
Cypress Park C	4000	3/01	7	1.7	4.0	4.0
Elkwater Lake A	4100	3/01	3	0.5	3.2	2.0
King Creek Saddle	4550	3/01	0	0.0	5.0	-
King Springs	4150	3/01	0	0.0	3.2	-
Kiwanis Camp	3720	2/27	0	0.0	-	-
Mission Mountain	5050	3/01	0	0.0	4.4	-
Rocky Boy	4700	2/27	7	1.2	4.3	4.2
Rocky Boy Pillow	4700	2/27	SP	1.4	4.0	4.2
Sucker Creek	3960	2/27	0	0.0	-	-
Taylor Road	4080	2/27	4	0.8	-	-
Val Marie D	2700	2/27	1	0.1	2.4	1.3
Wildhorse B	3450	3/01	0	0.0	1.8	1.5

ST. MARY RIVER

Hudson Bay Divide	5800	2/27	34	10.3	27.8	16.3
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ALBERTA - BOW RIVER BASIN

Bow River #1	5100	2/28	23	5.4	15.2	-
Chateau Lawn #8	5700	2/28	39	10.0	15.8	-
Mirror Lake #6	6600	3/01	33	8.2	19.0	-
Mount Eisenhower #10	5000	3/02	20	3.7	12.2	-
Upper Pipestone #2	5300	2/28	30	7.4	14.8	-

UPPER YELLOWSTONE RIVER

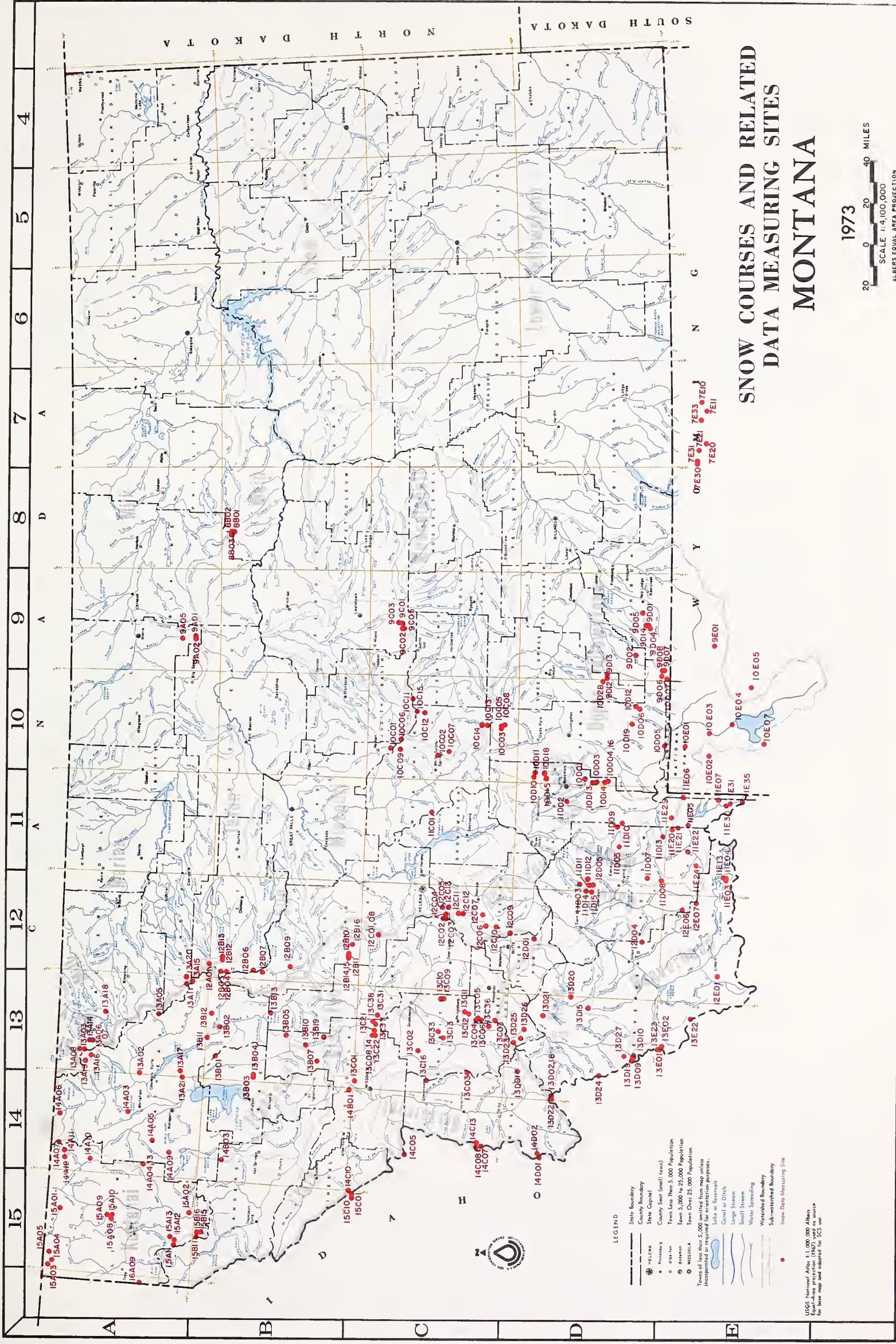
Bald Ridge	7500	2/28	30	7.9	12.4	10.1
Bots Sots	8000	3/02	25	4.6	-	-
Camp Senia	7890	2/26	16	5.2	6.9	4.8
Canyon	7750	3/01	40	11.9	17.6	13.4
Cooke Station	8150	2/28	42	12.2	21.3	15.8
Crevice Mountain	8400	2/27	23	5.6	9.6	7.2
East Entrance	7000	3/02	31	8.6	13.9	9.4
Fisher Creek	9100	2/28	73	23.8	47.7	29.6
Fisher Creek Pillow	9100	2/28	SP	21.9	44.6	-
Grizzly Peak	8400	2/28	45	12.2	22.6	13.1
Independence	7850	3/02	36	10.8	19.2	14.1
Lake Camp	7850	2/28	29	5.9	11.3	8.2
Lupine Creek	7300	2/27	26	7.4	15.7	9.4
Mill Creek	7500	2/28	30	7.4	9.3	-
Monument Peak	8800	3/02	48	15.2	25.7	20.0
Northeast Entrance	7400	2/28	16	4.5	12.6	7.6
Northeast Entrance Pillow	7350	2/28	SP	5.8	11.7	7.4

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

UPPER YELLOWSTONE RIVER (Continued)

Picket Pin Lower	6200	3/05	6	1.7	0.0	-
Picket Pin Middle	7250	3/05	21	6.3	19.4	-
Picket Pin Upper	8100	3/05	41	12.3	22.0	-
Porcupine Ranger Station	6500	2/28	22	6.1	7.4	6.3
Sacajawea	6550	2/27	31	8.8	13.8	10.8
South Fork Shields	8100	2/28	48	14.8	21.5	19.0
Sylvan Pass	7100	3/02	37	9.1	18.7	11.6
Thumb Divide	7900	3/01	43	12.1	25.2	19.0
Timberline Creek	8850	2/26	36	9.1	18.0	11.5
West Rosebud	7500				-	8.8
White Mill	8700	2/28	57	17.1	33.1	20.8
Wolverine	7650	3/01	30	7.6	18.0	-



SNOW COURSES AND RELATED DATA MEASURING SITES MONTANA

1973

0 20 40 MILES

SCALE 1:4,000,000

ALBERS EQUAL AREA PROJECTION

- LEGEND**
- State Boundary
 - County Boundary
 - State Capital
 - County Seat (small towns)
 - Town Less Than 5,000 Population
 - Town 5,000 to 25,000 Population
 - Town Over 25,000 Population
 - Towns of less than 5,000 omitted from map unless incorporated or required for orientation purposes.
 - Water of Reservoir
 - Large Stream
 - Small Stream
 - Water Spreading
 - Watershed Boundary
 - Sub-watershed Boundary
 - Snow Data Measuring Site

USGS National Atlas 1:4,000,000 Albers Equal-Area Projection, 1960 and used for base map and adopted for SCS use.

Agencies and Organizations Cooperating in Montana Snow Surveys

GOVERNMENT AGENCIES

Canada:

Department of Energy, Mines and Resources, Alberta
Water Investigations Branch, Department of Lands,
Forests, and Water Resources, British Columbia

Federal:

Department of the Army
Corps of Engineers
U.S. Department of Agriculture
Forest Service
Soil Conservation Service
U.S. Department of Commerce
NOAA, National Weather Service
U.S. Department of the Interior
Bonneville Power Administration
Bureau of Indian Affairs
Bureau of Reclamation
Bureau of Sports Fisheries and Wildlife
Geological Survey
National Park Service

STATE

Montana Conservation Districts
Montana Water Resources Board
Montana State University - Agricultural Experiment
Station
North Montana Branch Station - Agricultural Experiment
Station
University of Montana - School of Forestry

PRIVATE

Montana Power Company

Other organizations and individuals furnish valuable
information for snow survey reports. Their cooperation
is gratefully acknowledged.

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SOIL CONSERVATION SERVICE

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*"The Conservation of Water begins
with the Snow Survey"*